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State of Vermont
OFFICE OF THE GOVERNOR

THE VERMONT WAY FORWARD: ENVIRONMENTAL LEADERSHIP

25% Renewable Energy by 2025

The Governor's Bio-fuels Proposal

"By attacking the prime drivers of greenhouse gas emissions and redoubling our pledge to use renewable energy resources, Vermont will do even more to strengthen its position as a world leader in the environmental sciences..."

"If we are to have a truly meaningful impact on global environmental issues, we must lead the world in developing environmental solutions, and market those solutions to companies, states and countries who can only covet Vermont's deeply imbued environmental ethic."

Governor Jim Douglas, Inaugural Address, Thursday, January 4, 2007

EXECUTIVE SUMMARY

Our world faces very serious – and very real – challenges presented by climate change.

Along with our continued efforts – such as promoting energy efficiency, regulating greenhouse gas emissions from vehicles, and developing a statewide plan for reducing emissions – Governor Douglas believes we must continue to show the nation, and the world, that Vermont is prepared to take a leadership role in addressing global warming.

Fostering the development and use of bio-fuels in Vermont is a strong step in the right direction. Biodiesel can help Vermont reduce its reliance on fossil fuels, thereby reducing the state's carbon emissions and providing more energy diversity. Biodiesel also can bring new earning opportunities for our farms and rural communities.

At the Governor's direction, Vermont was the 14th state to join the 25x'25 Alliance, a coalition of more than 330 agricultural, forestry, business, labor, environmental, and civic organizations working to advance renewable energy solutions from our nation's farms, ranches and other working lands. The goal is to put America on the path to producing 25 percent of America's energy from renewable sources by 2025. The 25x'25 organization shares my goal of a

nationwide energy discussion that is focused on developing a responsible, long-term, sustainable and affordable energy future. Governor Douglas has adopted this goal for Vermont.

Vermont has one of the cleanest electric generation portfolios in the nation. Over 80 percent of the electricity generated to power Vermont homes and businesses produce few carbon emissions.

However, Vermonters use a significant amount of fossil fuels in the areas of transportation and heating. In 2000, transportation accounted for 46 percent of Vermont's greenhouse gas emissions, while 28 percent of Vermont's emissions were related to residential and commercial fuel use.

Governor Douglas is taking immediate action to encourage the purchase of more fuel-efficient vehicles and introduce more biodiesel into transportation and home heating. This effort is part of the Governor's strategy to reduce greenhouse gas emissions and strengthen Vermont's reputation as an environmental leader.

WHAT IS BIODIESEL?

- Biodiesel can be made from plant oils from crops such as soybeans, canola, and rapeseed; and from waste vegetable oils and animal fats.
- Biodiesel can be added to #2 fuel oil for heating, used in vehicles with diesel engines, or used in diesel backup generators for electric generation.
- Generally, pure biodiesel (B100) is blended into home heating and diesel fuel. If 5 percent biodiesel is combined into fuel oil, you get a B5 blend; 10 percent gives you B10 and so on.
- Biodiesel can be used in most engines and boilers with few or no modifications.
- Biodiesel produces little to no carbon emissions. When burned in a combustion engine (generally in transportation use), biodiesel reduces emissions of all regulated pollutants, with the exception of Nitrogen Oxides (NOx). If Vermont replaced 20 percent of its heating oil with biodiesel, the lifecycle reduction in CO2 emissions would be over 15 percent in that sector.

BIODIESEL TODAY

Vermont has made expanding the market for biodiesel a priority.

- The Vermont Agency of Transportation since 2004 has used over 40,000 gallons of B20 biodiesel per year in its vehicles.
- The use of biodiesel fuel and biomass fuels (primarily wood) account for approximately 24 percent of Vermont's state building heating energy use and reduces the state's fossil fuel consumption by an equivalent of 1,352,977 gallons. This reduces Vermont's CO2 greenhouse gas emissions by an estimated 15,286 tons annually.
- The Douglas administration supported the building of a biofuels production facility in Swanton, Vermont. Biocardel Vermont Inc. has secured a low-interest loan from the Vermont Economic Development Authority, and the Vermont Economic Progress Council has approved over \$500,000 in payroll and capital investment tax credits. The facility will produce 4 million gallons per year initially, and will expand production within three years to 8 million gallons annually.

- The Department of Public Service will continue to work with the Vermont Biodiesel Project, a collaborative working to develop the market for biodiesel. This project has facilitated the use of biofuels at Smuggler's Notch Resort and conducted a pilot testing of biodiesel blended with Number 6 heating oil at the Waterbury State Office Complex.

NEW BIODIESEL INITIATIVES

State Government can help create a market for biodiesel as a heating fuel and in transportation.

- Governor Douglas is proposing that the Department of Buildings and General Services increase the use of biodiesel, and other alternative fuels, in additional state buildings and hope to substantially increase the use of biofuels throughout state government.
- The State, as a large consumer of fuel, can create demand through a state government requirement to use biodiesel, which would in turn spur market development by creating an infrastructure for biodiesel.
- Vermont State facilities used over 2.5 million gallons of fuel oil in fiscal year 2006. If these heating fuels were blended with a 5 percent biodiesel mix, then we could displace over 125,000 gallons of carbon emitting fuel oil.

State government can assist the market for biodiesel in the transportation sector as well.

- The Vermont Agency of Transportation in 2007 will expand its use of B5 biodiesel to five of its nine maintenance districts and predicts use of some 200,000 gallons by years end. No infrastructure modifications are needed.
- Governor Douglas is calling on State government to increase the use of bio-fuels to match updated manufacturer's standards and warranties.

Home heating is a sector that has much promise in replacing a portion of our fuel oil with biodiesel.

- Overall, Vermonters annual consume approximately 149 million gallons of #2 diesel oil and 12.3 million gallons #6 oil in the residential, commercial, industrial, and farm sectors.
- If 5 percent biodiesel blends replace this usage, then 7.5 million gallons of #2 oil and over 600,000 gallons of #6 oil consumption could be displaced.
- Governor Douglas is asking the Legislature to establish a non-user refund (a rebate) to heating-fuel distributors that sell a B2 or B5 biodiesel blend so that they can pass the savings on to their customers.

Transportation remains our largest challenge and, therefore, our biggest opportunity.

- The total use of diesel fuel in Vermont for transportation was approximately 62 million gallons in 2004.
- Should all transportation diesel fuel in Vermont be a B5 blend, over 3 million gallons of diesel fuel could be displaced.
- Therefore, the Governor is proposing a reduction in the diesel fuel tax rate by 2 cents on biodiesel fuel blends sold for transportation purposes. Individuals and business can receive this rebate monthly.

Because Vermont is a rural state, we rely on our cars and trucks more than many other states.

- Vermont can do more to reduce the carbon footprint from everyday use by rewarding Vermonters that utilize more efficient vehicles.
- Governor Douglas is proposing a reduction in the purchase and use tax from 6 percent to 5 percent for Vermonters who purchase fuel-efficient vehicles or hybrid vehicles. Fuel-efficient vehicles would be defined as vehicles that meet or exceed 30 MPG.

Governor Douglas' proposals put Vermont on the road to producing 25 percent of its energy from renewable sources by 2025. With this plan, Vermont can inspire economic growth in rural areas, and improve and enhance our environment.

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